

US-PAT-NO: 5309243

DOCUMENT-IDENTIFIER: US 5309243 A

TITLE: Method and apparatus for extending the
dynamic range of
an electronic imaging system

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Brief Summary Text - BSTX (8):

To compensate for subject motion while obtaining multiple images, a two level optimization embodiment is provided that includes an image generating mechanism for generating a plurality of digitized images including a plurality of pixels at different exposure levels including at least one normal exposure level (N), one level above the normal exposure level (N+1), one level (N+1/2) equal to the geometric mean between the normal exposure level (N) and the level above the normal exposure level (N+1), one level below the normal exposure level (N-1), one level (N-1/2) equal to the geometric mean between the normal exposure level (N) and the level below the normal exposure level (N-1), a framestore for storing the digitized images produced by the image unit for comparing each of the pixels of the digitized image generated at the normal exposure level with a preselected normal exposure range to determine if the pixel is underexposed or overexposed.

Brief Summary Text - BSTX (9):

In operation, the electronic data processing unit replaces the pixel from the normal exposure level (N) with a corresponding pixel from the digitized